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09/255,052	02/22/1999	ANTOINE BOUCHER	TVW/APP13US	7929

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EXAMINER

LONSBERRY, HUNTER B

ART UNIT	PAPER NUMBER
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2623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 09/255,052	Applicant(s) BOUCHER ET AL.	
	Examiner Hunter B. Lonsberry	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 77-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 77-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant argues that the MUX taught by Bleidt teaches away from applicant's invention. Each user in Bleidt associated with the channel is assigned a specific slot in which the user's data is transmitted, in other words the MUX circuit of Bleidt reformats the data based on slots assigned to a user and transmits the data accordingly,. Consequently no multiplexing of multiple selected presentations from multiple users is taught by Bleidt as each user has a dedicated slot for transmission. (Pages 7-8).

The Examiner respectfully disagrees. The MUX 210 shown in figure 2 of Bleidt and marked with a TDM, along with the slots shown in figure 5 and variously throughout the Bleidt disclosure, corresponds to Time Division Multiplexing.

From <http://webopedia.com/TERM/T/TDM.html>

Short for *Time Division Multiplexing*, a type of multiplexing that combines data streams by assigning each stream a different time slot in a set. TDM repeatedly transmits a fixed sequence of time slots over a single transmission channel.

From http://en.wikipedia.org/wiki/Time-division_multiplexing

Time-Division Multiplexing (TDM) is a type of digital or (rarely) analog multiplexing in which two or more signals or bit streams are transferred apparently simultaneously as sub-channels in one communication channel, but physically are taking turns on the

channel. The time domain is divided into several recurrent **timeslots** of fixed length, one for each sub-channel. A sample, byte or data block of sub-channel 1 is transmitted during timeslot 1, sub-channel 2 during timeslot 2, etc. One TDM frame consists of one timeslot per sub-channel. After the last sub-channel the cycle starts all over again with a new frame, starting with the second sample, byte or data block from sub-channel 1, etc.

Since multiple users are assigned time slots, and the data from the multiple users are outputted into a single stream, Bleidt does in fact teach multiplexing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 77-79, 81-87, 89-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of Debey (USPN 5,701,582), in further view of Huizer et al (USPN 6,751,802), all cited by the Examiner.

Regarding claim 77, Alonso discloses a method which provides interactive world wide web access using a set top terminal in a VOD system. Alonso discloses addressable processing equipment (40-1 through 40-n) at a user location (see Fig. 1 and

col. 3, lines 11-14 and 42-45), the addressable processing equipment transmitting a request for a presentation is met by the requests for a VOD presentation, WWW presentation, information page presentation, menu presentation etc. (see col. 4, lines 36-40 and 48-53, col. 3, lines 16-20 and 37-40).

Alonso further discloses a presentation preparation headend server 30 (Fig. 1), including a set top receiver 42 (Fig. 1) coupled to the headend for receiving a request for presentation. Alonso further discloses the headend converts HTML pages received over the Internet into MPEG 2 format (see col. 5, lines 1-12, col. 5, lines 61-66) using a HTML to MPEG compiler.

Although Alonso discloses providing a presentation to the appropriate subscriber (see col. 8, lines 49-53, col. 3, lines 40-45), Alonso does not explicitly disclose the claimed the presentation request including a destination address corresponding to said addressable processing equipment at said user location.

However, the DeBey reference specifically teaches that when a subscriber request is made and sent to the head end, the head end scheduling and routing computer receives the request and records the subscriber ID or address (see col. 10, lines 42-47). Therefore, it would have been obvious to one of ordinary skill in the art to have modified the Alonso reference to further include the teachings of the Debey reference for the advantages of ensuring that the requested material is transmitted to the appropriate subscriber, eliminating the need for the server to insert a terminal identification parameter, and for comparing ID's at the subscriber terminal resulting in reduced data transmitted over the network and further reducing costs, hardware and software

associated with comparing ID's at the subscriber terminal. In addition to, it is notoriously well known to transmit a subscriber address upstream to a server to ensure the requested material is transmitted to the appropriate subscriber.

Alonso also discloses storing a plurality of web pages from web sites (see col. 6, lines 8- 15) and thus discloses receiving a plurality of selectable presentations at the presentation preparation server. Alonso further discloses the MPEG converted presentation can be stored in video store memory 38 (Fig. 1, col. 5, lines 1-12, col. 6, lines 8-15). Regarding the claimed, "multiplexing said selected presentation in MPEG digital video format with selectable presentations selected by other users into a single MPEG digital video transport stream", Alonso further discloses that computer 32/server 36 serve as a "MPEG packet multiplexer" (see col. 3, lines 42-59 and col. 5, lines 1-12 and 30-33). More specifically, Alonso discloses in col. 3, lines 42-59 that the Bleidt et al patent (US 5,671,377), which is incorporated by reference in its entirety, specifically teaches a digital information server 208 and a data multiplexing circuit 210 for use with a large number of users (see Fig. 2, col. 5, lines 40-49 and col. 6, lines 52-62 of Bleidt et al). Although, Alonso does not explicitly describe "multiplexing...selectable presentations...into an MPEG digital video transport stream", another reference Huizer, teaches that a selected (VOD) television program is transmitted from the server 1 to STB 2 in the form of an MPEG Transport Stream TS (col. 4, lines 1-7). Huizer further discloses that, the transport stream comprises audio packets and video packets. Each packet comprises a header and a payload. The header comprises a Packet IDentifier (PID) which identifies whether the packet carries audio data or video data. The

Transport Stream TS may comprise various television programs. A Program Map Table (PMT) is transmitted to indicate which PIDs constitute the relevant program (see col. 4, lines 25-49), and the PID of said control packets is associated with the relevant television program by means of the PMT described above (control packets associated with a different television program have a different PID) (col. 4 lines 59-63).

Furthermore, Huizer discloses that the MPEG systems specification allows the order of packets having different PIDs in a Transport Stream to be changed. This will be the case if the network between server and STB comprises remultiplexers (see col. 5, line 51-col. 6, line 48). If multiple transport streams are combined into a single transport stream and/or remultiplexers are used as disclosed in Huizer, a multiplexer is clearly part of the system. Therefore, Huizer clearly teaches multiplexing a selected presentation (VOD) in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream, and it would have been obvious to one of ordinary skill in the art to have further combined the Alonso reference with the additional teachings of Huizer, as described above, for the advantage of reducing the amount of bandwidth required for multiple users to access selectable presentations over a transmission network through the use of the MPEG standard.

Alonso further discloses the headend is coupled to the set top via a broadband cable or satellite network (see col. 3, lines 31-35) for transmitting the selected presentation to the addressable subscriber equipment at the user location. It is noted that the set top terminal inherently comprises an MPEG decoder for decoding the received MPEG streams (see col. 4, lines 8-17, col. 3, lines 20-40).

Alonso does not explicitly describe or disclose indicating the position of the selected presentation in the MPEG digital video format in the MPEG video transport stream. However, in analogous art, the Huizer reference, as combined with Alonso above, further teaches receiving a Program Map Table to indicate which PIDs constitute the relevant program, as discussed above, as well as accommodating position labels in the audio and video packets themselves, where the position labels are accommodated in the adaptation field which the MPEG standard provides. In addition, Huizer discloses a VOD system which employs trick plays and teaches problems associated with trick plays in particular, "However, the non-linear playback of MPEG transport streams and program streams from video servers has not received the same level of attention. Non-linear playback involves the interruption and continuation of the stream and is necessary for basically all kinds of trick modes. Trick modes require an accurate control of the stream" (see col. 1, lines 40-46). Huizer further teaches, "In order to allow the receiver to flawlessly resume signal reproduction after a pause, position labels are inserted into the bit stream at positions where the server can resume transmission of the signal after an interruption" (see Abstract). Therefore, it would have been obvious to modify the VOD system of Alonso based on the teachings of Huizer to include the claimed "transmitting an addressable message to said addressable processing equipment at said user location to indicate the position of selected presentation in the MPEG digital video format in said MPEG video transport stream" for the benefit of correctly locating the transport stream packets, as well as enabling a trick play VOD

system which flawlessly resumes the signal production.

As to claim 78, Alonso discloses an MPEG image (see col. 2, lines 33-43) and thus discloses the claimed limitation.

As to claims 79 and 81, Alonso discloses transmitting in the MPEG format and thus inherently discloses the claimed "wherein said selected presentation is MPEG digital video format is a group of pictures sequence including a least one MPEG I-frame and one or more MPEG P- frames forming a video sequence." Further Alonso discloses an MPEG stream which inherently comprises I-frames, P-frames and B-frames.

As to claim 82, Alonso discloses the claimed audio (see col. 4, lines 15-17). It is noted that since the audio is transmitted via the MPEG format, Alonso discloses the claimed "MPEG encoded audio sequence".

As to claim 83, the combination of Alonso, DeBey and Huizer discloses the claimed limitation, wherein Alonso, DeBey and Huizer disclose an MPEG transmission system and thus discloses the claimed limitations which are inherent in an MPEG system.

As to claim 84, Alonso discloses the claimed two-way broadband signal distribution network (see cols. 25-30).

Claims 85-87 and 89-92 correspond to claims 77-84.

Claims 80 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of DeBey (USPN 5,701,582), in further view of Huizer et al (USPN 6,751,802), as applied to the claims above, and further in view of Hooper et al (USPN 5,422,674), all cited by the Examiner.

As to claims 80 and 88, the combination of Alonso, DeBey and Huizer fails to disclose the claimed wherein said selected presentation in MPEG digital video format is an MPEG P-frame forming a data overlay.


However, in related art, the Hooper et al reference teaches the use of MPEG P-frames for overlay images (see col. 7, lines 14-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Alonso, DeBey and Huizer to include the claimed limitation as taught by Hooper et al for the benefit of having simultaneous display of content while maximizing content space on the display for primary content using MPEG encoded compressed P-frames for image overlays.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Hunter B. Lonsberry
Primary Examiner
Art Unit 2623

HBL